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# **Gypsy Moth Management in the United States: *a cooperative approach***

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## **Record of Decision**

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**United States  
Department of Agriculture**



**Forest Service**



**Animal and Plant Health  
Inspection Service**

Newtown Square, PA

NA-MB-01-13

December 2012

United States  
Department of  
Agriculture



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## Handy reference to alternatives

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### Alternatives:

- Alternative 1—No action (no change from the 1996 Record of Decision)
- Alternative 2—Add tebufenozide to the approved treatments
- Alternative 3—Add tebufenozide to the approved treatments and add future treatments through the application of the protocol

The complete final supplemental environmental impact statement “Gypsy Moth Management in the United States; a cooperative approach” consists of four volumes:

Volume I—Summary

Volume II—Chapters 1-8; Appendixes A-E

Volume III—Appendixes F-I (risk assessments)

Volume IV—Appendixes J-M (risk assessments and risk comparison)

The record of decision is a separate document published and available at least 30 days after the notice of availability for the final supplemental environmental impact statement is published in the Federal Register (40 CFR Part 1506.10).

All four volumes of the Final Supplemental EIS and this Record of Decision can be viewed and downloaded at <http://na.fs.fed.us/pubs/detail.cfm?id=5251>.





# **Gypsy Moth Management in the United States: *a cooperative approach***

## **Record of Decision**

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## Purpose

This Record of Decision (ROD) documents the programmatic decision that will guide the U.S. Department of Agriculture's (USDA) National Gypsy Moth Management Program and describes the rationale for that decision. Our decision is based upon consideration of the three alternatives analyzed in the final supplemental environmental impact statement (SEIS), "Gypsy Moth Management in the United States: a cooperative approach," dated August 2012.

This decision does not change current direction for the USDA National Gypsy Moth Management Program, but adds to it. Since 1996, the USDA has carried out its gypsy moth management responsibilities through the Forest Service and the Animal and Plant Health Inspection Service (APHIS) and pursuant to a programmatic decision based on a 1995 environmental impact statement (EIS) for gypsy moth management. Changes in gypsy moth status, management techniques, and accepted methodology for preparing human health and ecological risk assessments have occurred since 1995. In addition, updated and new information on gypsy moth and the approved treatments indicated that a supplement to the 1995 gypsy moth EIS was needed.

The USDA National Gypsy Moth Management Program was developed to guide how the Forest Service and APHIS will assist in funding and carrying out projects to reduce damage caused by gypsy moth outbreaks, eliminate isolated infestations of the insect, and slow the spread of gypsy moth along the leading edge of the infested area. The gypsy moth (*Lymantria dispar* [L.]) is a nonnative insect that alters ecosystems, destroys the beauty of woodlands, and disrupts people's lives and livelihoods by feeding on the foliage of trees, shrubs, and other plants. Although European and Asian strains exist, only the European strain is known to be in the United States at this writing. The European gypsy

moth, brought to the United States and accidentally released in eastern Massachusetts around 1869, is now established in all or portions of 19 northeastern, mid-Atlantic, and Midwestern states, and the District of Columbia. It continues to spread into uninfested areas. The Asian strain occasionally has been found in the United States, and has been eliminated whenever it has been found.

## Statutory Authorities

The Forest Service and APHIS conduct pest management activities under broad discretionary authority given by Federal laws including the Plant Protection Act of 2000, as amended (7 U.S.C. 7701 et seq.); and the Cooperative Forest Assistance Act of 1978 as amended by the Forest Stewardship Act of 1990 (16 U.S.C. section 2101(note)). USDA gypsy moth policy and activities conducted under these statutory authorities are described in Appendix B (Gypsy Moth Management Program) of the final SEIS.

## The Decision

We have selected Alternative 3, which has two parts. First, it adds tebufenozide to the list of currently approved treatments in the USDA National Gypsy Moth Management Program. Second, it allows for adding new treatments to those already approved for the program. A new treatment may be added only if the risks it poses to human health and nontarget organisms are no greater than the risks disclosed in the final SEIS for the currently approved treatments and tebufenozide. The finding must be made through the application of the protocol that is described in Chapter 2 (Volume II) in the final SEIS and attached to this decision. Any new treatment must also be registered by the U.S. Environmental Protection Agency for use on gypsy moth.

This decision, like the SEIS, and like the 1995 EIS and 1996 decision, is programmatic; it does not authorize any specific project, but sets the parameters within which project decisions for gypsy moth management will be made. Implementation of this selected alternative requires that site-specific environmental analyses be conducted, and public input gathered to identify and consider local issues before any Federal or cooperative suppression, eradication, or slow-the-spread projects are authorized and implemented. These site-specific environmental analyses will be tiered to the programmatic SEIS and documented in accordance with agency National Environmental Policy Act (NEPA) implementing procedures. Alternative 3 allows project managers to adapt available treatment options to local conditions in a manner that best reduces gypsy moth damage while minimizing unintended adverse environmental effects. Required consultations with appropriate Federal and State agencies, such as for threatened and endangered species, will also be conducted as needed before treatment projects are implemented.

Actions taken against the gypsy moth by other agencies, organizations, or individuals without the participation of the Forest Service or APHIS are outside the scope of the SEIS and this ROD.

## **Alternatives**

The following three alternatives were considered in detail in the SEIS:

**Alternative 1**—No action; that is, no change from the 1996 Record of Decision

**Alternative 2**—Add the insecticide tebufenozide to the list of currently approved treatments

**Alternative 3**—Add the insecticide tebufenozide to the list of currently approved treatments, and add other new treatments that pose no greater risks to human health and nontarget organisms than the risks

that exist with use of currently approved treatments and tebufenozide. Such treatments may be added only through the application of the protocol described in the final SEIS and attached to this ROD.

## **Environmentally Preferable Alternative**

Alternative 3 is environmentally preferable. This alternative results in no greater risk to human health and nontarget organisms than the other alternatives would; and, as new treatments are added, may even be better than the other alternatives if new treatments result in fewer risks. Furthermore, because Alternative 3 allows for adding treatments in the future, project managers may have a greater array of options that will allow them to maximize treatment effectiveness and to minimize unintended adverse environmental effects by selecting treatments that better match site-specific conditions. Alternative 3 includes a protocol for adding any new treatment to the approved list of treatments. The protocol is attached to this ROD.

## **Rationale for the Decision**

Alternatives were compared on the basis of three selection criteria: (1) how the alternatives respond to the goal of the USDA National Gypsy Moth Management Program, as determined by expected future conditions for each alternative, (2) how the alternatives respond to issues raised during scoping, and (3) how much flexibility the alternatives provide for managing ecosystems.

We selected Alternative 3 for these reasons: it fully meets the USDA goal of reducing the adverse effects of the gypsy moth on the nation's forests and trees, it addresses the major issues associated with gypsy moths and their treatment, and it provides project managers

the greatest amount of flexibility (the greatest number of options) in managing ecosystems affected by the gypsy moth.

### **Meets USDA Goal**

Each of the three alternatives would meet the USDA goal to reduce the adverse effects of the gypsy moth on the nation's forests and trees; however, in the long term Alternative 3 is the best choice. Alternative 3 not only adds the new treatment tebufenozide to the list of approved treatments in the gypsy moth program, but accommodates the timely addition of new treatments in the future through the implementation of the attached protocol. The addition of tebufenozide provides project managers with an insecticide option that not only is highly effective at reducing high gypsy moth population levels and protecting host foliage, but that may have fewer potential adverse effects on invertebrates in aquatic ecosystems than other currently available treatments. The availability of an additional treatment option gives project managers more choices (flexibility) and might also stimulate competition between manufacturers of these treatment products, which could translate into lower costs. These are benefits to the USDA National Gypsy Moth Management Program that Alternative 2 also provides but that Alternative 1 does not.

The protocol associated with Alternative 3 will permit the timely addition of treatments that meet the USDA goals into the national program in the future. The authorization to add future new treatments through a streamlined, but rigorous protocol allows for the continuous improvement of the USDA National Gypsy Moth Management Program in responding to and reducing the adverse effects of the gypsy moth on the nation's forests and trees. By providing more treatment options for project managers, this alternative increases the likelihood that project objectives (USDA goals)

will be achieved while local issues and concerns, such as potential adverse effects on nontarget organisms and risks to human health, are addressed. Without the protocol, the Forest Service and APHIS would have to engage in the costly and time-consuming process to revise the SEIS each time we want to add a new treatment to the program, with no appreciable benefit. Applying the protocol, the agencies must prepare a human health and ecological risk assessment and a risk comparison of the human health and ecological risks of a new treatment with the risks identified for the currently authorized treatments and tebufenozide. They must also give the public an opportunity to review and comment on the findings of the risk assessment and risk comparison, and must consider those comments. Alternative 3 provides these benefits to the USDA National Gypsy Moth Management Program; Alternatives 1 and 2 do not.

### **Responds to Issues**

The major issues that were raised during scoping and that influenced our decision are summarized in the question: How would gypsy moth, current treatments, tebufenozide, and a new treatment added under the protocol affect human health, nontarget organisms, and forest condition?

The SEIS, at Appendix E, "Biology, History, and Control Efforts for the Gypsy Moth," describes how the response to gypsy moth has evolved over time. In particular, this appendix explains (or describes) how, over time, the program has replaced broad spectrum chemicals that pose greater risks to nontarget organisms and people with treatments that pose fewer risks. This is a trend that we anticipate will continue with our decision to select Alternative 3, as new treatment options become available and are examined for addition into the program.



## **Human Health**

Human health concerns fall within two categories:

(1) concerns about the effects caused by the presence of large numbers of gypsy moth caterpillars (including skin rashes, hazardous walkways, and emotional discomfort from the presence of vast numbers of insects), and (2) concerns about the effects of possible exposure to gypsy moth treatments. A detailed examination of the human health risks is presented in Volumes III and IV, Appendixes F through M of the final SEIS.

The choice of treatments under all three alternatives would provide project managers with a range of options to help them address site-specific issues and concerns related to human health risks from exposure to the insect as well as exposure to the treatments. The presence of large populations of gypsy moths is recognized as an ongoing risk to human health through irritation to eyes, skin, and respiratory system. The ability of the treatments to reduce the likelihood of caterpillars coming into contact with people and causing allergic reactions varies depending on the gypsy moth population levels in those areas that are planned for treatment. Some treatments might be better suited than others to reduce caterpillar levels and thereby be more effective in minimizing the potential for people to come into contact with the insect.

Potential exposure of people to the approved treatments used in gypsy moth treatment projects has been examined in the risk assessments and is considered to be within an acceptable margin of safety. Nonetheless, public perception about pesticide exposure exists and commonly surfaces as an issue or concern when treatment projects are proposed. Having a range of treatment options affords project managers greater flexibility in selecting treatments that address human

health concerns of the public and project objectives to reduce gypsy moth populations.

Alternative 3, in the long term, provides the greatest flexibility to project managers to tailor treatments to specific situations. Alternative 3 provides a streamlined yet protective process for adding new treatments in the future to the approved list of treatments. Such treatments may be more efficacious on gypsy moth, but may not pose a greater health risk than currently approved treatments do. New treatments may very well pose even lower potential human health risks than current treatments do.

## **Nontarget Organisms**

The gypsy moth is the target of treatments. All other plant or animal species are considered nontarget organisms and are potentially affected directly or indirectly by some gypsy moth treatments. Nontarget organisms may also be affected by the presence of gypsy moth caterpillars as well as by the defoliation they cause. The ecological risks, including those to nontarget organisms, have been carefully examined and disclosed in the risk assessments (Appendixes F-M of the SEIS) that were prepared for each of the treatments in the SEIS.

Alternative 1 would not change the potential adverse effects on nontarget organisms that were previously described and accepted in the 1996 ROD.

Alternative 2, with the addition of the insecticide tebufenozide to the list of approved treatments, would reduce the potential effects on aquatic invertebrates compared with some of the currently approved insecticides. Tebufenozide is also as effective as other approved treatments in reducing gypsy moth population levels and protecting tree foliage. The addition of tebufenozide to the list of approved treatments provides another treatment option that is efficacious on

gypsy moth but has fewer potential nontarget effects around aquatic ecosystems than currently authorized treatments do. Alternative 3 has the same advantages and potential effects on nontarget organisms as Alternative 2 does. Under Alternative 3, however, through the application of the protocol required by our decision (Attachment), new future treatments that have no greater potential effects on nontarget organisms can be added to the approved list of treatments and incorporated into the USDA National Gypsy Moth Management Program more quickly.

### **Forest Condition**

Tree species diversity, age class distribution, and overall health and vigor of forests and trees are affected by gypsy moth defoliation. During outbreaks, gypsy moth caterpillars often completely consume host tree foliage, causing trees to expend energy reserves to produce new leaves. Repeated defoliations in subsequent years weaken trees, leading to extensive areas of dieback and mortality, which permit other tree and plant species (including invasive plants) to grow and change the overall characteristics of the affected area. Oak species are the most highly favored hosts of the gypsy moth, and the impacts of gypsy moth outbreaks and defoliation on forest condition are particularly dramatic in oak-dominated forests. The alternatives in this SEIS and the approved list of treatments do, however, directly affect the management of gypsy moth populations and the impacts they cause. The current characteristics and condition of individual forest stands, then, can be protected through treatment.

Overall, the current list of approved treatments in all three alternatives provides effective tools to reduce damage to trees and forest stands caused by gypsy moths. Alternative 2 adds the insecticide tebufenozide to the list of approved treatments. This insecticide is also effective in reducing gypsy moth populations

and helps to protect forest conditions where it is used. When used around aquatic ecosystems, the insecticide also has fewer potential effects on nontarget invertebrates than currently approved treatments do. Alternative 3 not only adds tebufenozide to the list of approved treatments but also allows, through implementation of the protocol, the addition of new future treatments that are unknown at this time. Under this alternative, new treatments can be more quickly incorporated into the gypsy moth program. Such treatments may even be more effective against gypsy moths and, therefore, more protective of forest condition.

### **Provides Management Flexibility**

The alternatives differ in the range of treatments that the Forest Service and APHIS could use to manage or to help others manage gypsy moth infestations. Having a greater choice of treatment options will help project managers achieve a finer balance between meeting project objectives, addressing issues and concerns, and minimizing adverse effects.

Alternative 1 would provide only for the use of the current treatments, which were authorized in the 1996 ROD. While those treatments have proved to be adequate options for gypsy moth projects in the past, Alternative 1 would keep managers locked into only those treatment options that were available in 1996. Alternative 1 would not allow project managers to use new treatment options available since 1996 or to examine and consider new treatment tools that could become available in the future. While gypsy moth projects would probably continue to be executed successfully under Alternative 1, the USDA National Gypsy Moth Management Program could not incorporate new and better treatment options that could give project managers a greater range of choices for addressing efficacy, project costs, local issues and

concerns, and potential adverse effects on nontarget organisms and human health and forest condition.

Alternative 2 would add some flexibility by adding one new treatment option, tebufenozide. When applied near and around streams and other bodies of water, tebufenozide poses less of a risk to aquatic invertebrates than diflubenzuron does. Tebufenozide is as effective as diflubenzuron in reducing very high gypsy moth populations and protecting host tree foliage. Other approved treatment options could perform similarly but might require multiple applications, thereby doubling or tripling application costs. Alternative 2 would add a new treatment option in the USDA National Gypsy Moth Management Program, but it would not accommodate the examination and timely addition of new and better treatment options to the program in the future.

Alternative 3 includes all of the treatment options authorized in the 1996 ROD, adds tebufenozide, and allows the addition of new future treatment options to the USDA National Gypsy Moth Management Program through a streamlined, yet still protective process. Alternative 3 ensures that the USDA gypsy moth management program continues to evolve and incorporate new and better treatment options that will give project managers more flexibility in responding to local issues and concerns.

The Forest Service and APHIS, and Federal, State, and Tribal cooperators would decide where and how to treat gypsy moths and how to mitigate treatment effects. Those decisions would require that local issues and concerns be considered and that site-specific environmental analyses be conducted and documented in accordance with agency NEPA implementing procedures.

## **Cumulative Effects**

Cumulative effects are those impacts on the environment that result from more than one action, for example, from the incremental impacts of action by the USDA National Gypsy Moth Management Program and of other past, present, and reasonably foreseeable actions, regardless of what agency or person takes the other actions. Cumulative effects may result from individually minor, but collectively significant, actions taking place over time. Cumulative effects that may result from implementing any of the alternatives can be caused by:

- Repeated gypsy moth outbreaks and defoliation of the same area;
- Repeated treatment of the same area in the same season;
- More than one type of treatment being used in the same area in the same season; and
- Retreatment of the same area in the following season or a season soon after, such that the same resources are affected.

An analysis of cumulative effects for the different treatments is presented in Chapter 4 of the SEIS (Volume II):

for the gypsy moth on pages 9 and 10;  
for *Bacillus thuringiensis* var. *kurstaki* (B.t.k.) on pages 14 and 15;  
for diflubenzuron on page 18;  
for disparlure on page 20;  
for dichlorvos on page 22;  
for Gypchek on page 23;  
for tebufenozide on pages 27 and 28, and  
for all treatments collectively on pages 28 and 29.

The findings for cumulative impacts on human health and nontarget species are summarized here.



The cumulative effects on human health are anticipated to be less under Alternative 3 than under the other alternatives. The presence of large populations of gypsy moths is recognized as an ongoing risk to human health through irritation to eyes, skin, and respiratory system. To the extent that control and eradication efforts limit these effects, program actions would reduce this cumulative impact. The allowance for treatment options in addition to tebufenozide under Alternative 3 includes effective treatments that reduce exposure of humans to moths and moth parts, such as hairs, and thus the potential magnitude of adverse effects is less.

Two treatments currently used in the program, *B.t.k.* and Gypchek, might also cause some skin irritation in people, but the amount of irritation is less than would result from people coming into direct contact with gypsy moth caterpillars. No plausible human health effects relate to the use of disparlure. Although diflubenzuron and tebufenozide are known to reduce the oxygen-carrying capacity of blood (increase methemoglobin), application rates used in USDA gypsy moth projects were determined to be unlikely to approach exposure levels of concern following application of either or of both treatments. Dichlorvos use in traps poses a potential risk of dermal exposure for persons who tamper with or ingest dichlorvos strips in traps. Adverse human health effects from dichlorvos have never been documented in USDA projects. Improper handling of dichlorvos strips poses a cumulative risk to workers, but program adherence to pesticide label restrictions and mandatory safety procedures preclude these effects.

The cumulative effects on nontarget organisms are greatest from repeated defoliation of trees by gypsy moth caterpillars. The control efforts to reduce defoliation are associated with reduced cumulative

effects on the host trees and those organisms depending on the host trees for survival. Gypchek, mass trapping with dichlorvos, and disparlure have no long-term or cumulative effects on nontarget terrestrial species. Use of these control measures in the USDA Gypsy Moth Management Program is not expected to impact aquatic organisms, based upon results of analysis of hazard quotients. Applications of *B.t.k.*, diflubenzuron, and tebufenozide are known to affect various classes of invertebrates. *B.t.k.* and tebufenozide affect only larval stages of certain spring-feeding butterflies and moths that feed on treated foliage. Use of diflubenzuron is known to affect moths, butterflies, grasshoppers, parasitic wasps, aquatic insects, and some crustaceans. Repeated spraying of *B.t.k.*, diflubenzuron, and tebufenozide in the same area over two or more consecutive years has the potential to result in cumulative impacts on those sensitive species.

The availability and use of more treatment options under Alternative 3 provides future options that may be even safer to the environment. Under this alternative, project managers have the ability to choose treatments that minimize cumulative effects on sensitive species, while still reducing the extent of defoliation from the gypsy moth.

## Mitigating Measures

Given the variety of places in the United States and local conditions and circumstances where gypsy moth projects could be implemented under Alternative 3, it will be necessary to develop and implement specific mitigation measures for each treatment project. Our decision continues the practice in place since the 1996 ROD, of project managers developing and implementing mitigation measures as necessary on a site-specific basis for each project, to address local conditions, needs, issues, and concerns.

Site-specific mitigation measures developed and employed in gypsy moth projects under the 1996 ROD have most often been put in place to minimize the exposure of people and nontarget organisms to treatments in and near project areas. Site-specific mitigation measures have also been implemented to reduce potential impacts on economic resources such as organic farms. At the same time, the objectives of gypsy moth projects have also been met. We expect that success will continue with our decision to select Alternative 3. Site-specific mitigation measures will continue to be developed and implemented at the project level, as appropriate. The SEIS presents examples of mitigation measures that were implemented on site-specific projects in the past (Volume II, Chapter 2, pages 4 and 5).

## **Endangered Species Act**

In compliance with the Endangered Species Act of 1973 (16 U.S.C. sections 1531-1536, 1538-1540), the Forest Service and APHIS have committed to consult with the U.S. Fish and Wildlife Service (F&WS) or, when appropriate, the National Marine Fisheries Service on gypsy moth treatments that would be conducted by the Forest Service and APHIS, or those conducted in cooperation with other Federal agencies or States.

We requested concurrence from the F&WS with our determination that USDA management of gypsy moth in the United States is not likely to adversely affect endangered and threatened species or critical habitat under the jurisdiction of the F&WS outside Karner blue butterfly (*Lycaeides melissa samuelis*) habitat in Wisconsin. The F&WS concurred with our determination and indicated that “[e]ffective coordination with the [Fish and Wildlife] Service’s field organization will be a key element in ensuring the avoidance of adverse effects to listed species and

their habitats.” Such coordination at a local level will ensure that the program will have no effect or is not likely to adversely affect federally listed species or designated critical habitat for each gypsy moth project that is proposed. We will ensure that any protection measures for threatened and endangered species or critical habitat that result from such coordination will be implemented. If incidental adverse effects to listed species or critical habitat are likely to occur, we will reinitiate consultation with the F&WS. Where formal consultations currently take place for USDA-sponsored gypsy moth treatments that may adversely affect Karner blue butterfly in Wisconsin, we will continue that established consultation process. This process has been developed and agreed to locally by the F&WS’ Green Bay, WI, Ecological Services Office.

## **Monitoring**

Gypsy moth populations in the United States are monitored annually by APHIS, the Forest Service, and the States, to detect new infestations, monitor population outbreaks, and to track populations along the leading edge of the infested area. Such monitoring provides the early warning needed to identify areas where direct intervention (treatments) may be necessary to eliminate isolated infestations of the insect, to reduce damage caused by population outbreaks, and to reduce the natural spread of the insect into uninfested areas. Once treatments are decided upon, the project areas are monitored during the treatments to ensure that they are carried out as planned. After the treatments, a subset of the project areas are assessed to determine if the treatments met the project objectives, that is, had the intended effect on the gypsy moth populations.

Collectively, the insect and treatment monitoring and assessments implemented in the USDA National Gypsy Moth Management Program have served the program



well over the years by helping to find new isolated infestations early and by projecting when and where damaging population levels are likely to occur and where. The result has been a highly successful gypsy moth management program. The Forest Service and APHIS plan to maintain this approach of monitoring and assessment, to ensure our funding and efforts are put to good effect. Project managers may do additional monitoring on a case-by-case basis after assessing local issues and concerns.

## **Public Involvement**

An extensive public involvement effort informed the public about the SEIS and elicited suggestions, ideas, and concerns related to gypsy moth management. Public outreach was conducted throughout the duration of the SEIS process and was highlighted by formal public comment periods in which written comments were sought.

The first formal opportunity for the public to comment on the SEIS was initiated in April 2004, when the Forest Service and APHIS published a Notice of Intent (NOI) to Prepare a Supplement to the Final EIS for Gypsy Moth Management in the United States: a cooperative approach (69 Federal Register (FR) 23492-93, April 29, 2004). The public was invited to comment on the proposed supplement.

To identify and reach the interested and affected public across the United States, the Forest Service and APHIS developed a public outreach plan, compiled a national mailing list, and prepared informational materials about the SEIS project and the gypsy moth. In May 2004, the agencies mailed an informational bulletin requesting input on the plan to prepare the SEIS, to nearly 13,000 individuals and organizations. Addressees included scientists, members of conservation and environmental groups, persons working in forestry and related

industries, homeowners, landowners, over 2,000 libraries, and Federal, Tribal, State, and local officials. The SEIS team also gathered comments and input from within the Forest Service and APHIS, other Federal land management agencies, and agencies in 25 different States that had expressed interest in the SEIS. The result of this extensive national scoping process was the identification of two significant issues that subsequently guided the development of the SEIS: the risk to human health and the risk to nontarget organisms.

The second formal opportunity for the public to comment was initiated in September 2008 with the publication in the Federal Register of the Notice of Availability of the draft SEIS (73 FR 54397, September 19, 2008) and of the extension of the comment period, for a total of 90 days (73 FR 70640, November 21, 2008). The Forest Service and APHIS mailed 419 hard copies and 765 CDs (electronic copies) of the complete draft SEIS to individuals and organizations who requested it, and to Federal and State agencies interested in the gypsy moth, public health, or the environment. An additional 146 copies of the summary of the draft SEIS were mailed to individuals and organizations with the suggestion that if they wished to submit comments, they should review the complete draft SEIS. The draft SEIS was also available on a specially designed Web site for viewing and downloading. The Web site was visited by 1,240 individuals; 792 visited once, and 448 visited more than once. Letters were received from commenters in 14 States across the country and from the District of Columbia. Thirty-four people sent 18 letters, 22 e-mails, and 1 fax, for a total of 41 comment letters. Five of those comment letters were received after the December 18, 2008, deadline for public comment. Nevertheless, the Forest Service and APHIS considered the comments in those letters.

## Record of Decision

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The time period between the Notice of Availability of the final SEIS (October 19, 2012) and this decision also provided an opportunity for public comment. No comments were received during this period.

To conduct public involvement on a national scale and to ensure that the final SEIS serves all areas of the United States, the preparers of the SEIS were assisted by public affairs and forest project managers throughout the Forest Service and APHIS. A detailed accounting of the public affairs and public involvement activities and the Forest Service and APHIS response to comments appears in Volume II, Appendix C, of the final SEIS.

### Implementation

This decision continues the requirement of the USDA National Gypsy Moth Management Program that specific gypsy moth treatments may be authorized only after analysis of the site-specific environmental effects, carried out in accordance with the National Environmental Policy Act and any other applicable legal requirements.

### Effective Date

Our decision is effective immediately.

Our decision is not subject to administrative appeal because it neither implements a national forest land and resource management plan (36 CFR 215.1) nor approves, amends, or revises a national forest land resource management plan or regional guide (36 CFR 219.17).


Questions concerning this decision or other topics related to the final SEIS should be directed to either of the following individuals:


Noel F. Schneeberger  
USDA Forest Service  
Northeastern Area State and Private Forestry  
11 Campus Blvd., Suite 200  
Newtown Square, PA 19073

Or

Julie Spaulding  
National Gypsy Moth Program  
USDA Animal and Plant Health Inspection Service  
Plant Protection and Quarantine  
4700 River Road, Unit 137  
Riverdale, MD 20737

### Responsible Officials

	11/28/12
<hr/>	
James E. Hubbard, Deputy Chief	Date
State and Private Forestry	
USDA Forest Service	
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201 14 <sup>th</sup> Street, S.W.	
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	12/05/12
<hr/>	
Rebecca Bech, Deputy Administrator	Date
Plant Protection and Quarantine	
USDA Animal and Plant Health Inspection Service	
Administration Building, Room 312-E	
Washington, DC 20250-3401	

## Attachment

### Protocol for Adding New Treatments to the List of Approved Gypsy Moth Treatments (Final Gypsy Moth SEIS, Volume II, Chapter 2, Alternative 3, pages 2 and 3)

A new treatment would be available for use upon the agencies' finding that the treatment poses no greater risks to human health and nontarget organisms than are disclosed in the final SEIS for the currently approved treatments and tebufenozide, and it is registered by the U.S. Environmental Protection Agency for use on gypsy moth. The protocol for making the necessary finding that a treatment is authorized is as follows:

1. Conduct a human health and ecological risk assessment (HHERA). In this risk assessment review all scientific studies available for toxicological and environmental fate information relevant to effects on human health and nontarget organisms. Use this information to estimate risk to human health and nontarget organisms. Include these four elements in the HHERA: (a) hazard evaluation, (b) exposure assessment, (c) dose-response assessment, and (d) risk characterization. The HHERA will do the following:
  - Identify potential use patterns, including formulation, application methods, application rate, and anticipated frequency of application.
  - Review hazards relevant to the human health risk assessment, including systemic and reproductive effects, skin and eye irritation, dermal absorption, allergic hypersensitivity, carcinogenicity, neurotoxicity, immunotoxicity, and endocrine disruption.
  - Estimate exposure of workers applying the chemical.
  - Estimate exposure of members of the public.
  - Characterize environmental fate and transport, including drift, leaching to groundwater, and runoff to surface streams and ponds.
  - Review available ecotoxicity data including hazards to mammals, birds, reptiles, amphibians, fish, and aquatic invertebrates.
  - Estimate exposure of terrestrial and aquatic wildlife species.
  - Characterize risk to human health and wildlife.
2. Conduct a risk comparison of the human health and ecological risks of a new treatment with the risks identified for the currently authorized treatments and tebufenozide. This risk comparison will evaluate quantitative expressions of risk (such as hazard quotients) and qualitative expressions of risk that put the overall risk characterizations into perspective. Qualitative factors include scope, severity, and intensity of potential effects, as well as temporal relationships such as reversibility and recovery.
3. If the risks posed by a new treatment fall within the range of risks posed by the currently approved treatments and tebufenozide, publish a notice in the Federal Register of the agencies' preliminary findings that the treatment is authorized by the 2012

Record of Decision, for use in the USDA National Gypsy Moth Management Program. The notice must provide a 30-day public review and comment period, and must advise the public that the HHERA and the risk comparison are available upon request.

4. If consideration of public comment leads to the conclusion that the preliminary finding is correct, publish a notice in the Federal

Register that the treatment is authorized by the 2012 Record of Decision for use in the USDA National Gypsy Moth Management Program and therefore may be authorized by project decisions implementing that program. The Forest Service and APHIS will make available to anyone, upon request, a copy of the comments received and the agencies' responses.



## Pesticide Precautionary Statement

Pesticides used improperly can be injurious to humans, animals, and plants. Follow the directions and heed all precautions on the labels.

Store pesticides in original containers under lock and key--out of the reach of children and animals--and away from food and feed.

Apply pesticides so that they do not endanger humans, livestock, crops, beneficial insects, fish, and wildlife. Do not apply pesticides when there is danger of drift, when honey bees or other pollinating insects are visiting plants, or in ways that may contaminate water or leave illegal residues.

Avoid prolonged inhalation of pesticide sprays or dusts; wear protective clothing and equipment if specified on the container.

If your hands become contaminated with a pesticide, do not eat or drink until you have washed. In case a pesticide is swallowed or gets in the eyes, follow the first-aid treatment given on the label, and get prompt medical attention. If a pesticide is spilled on your skin or clothing, remove clothing immediately and wash skin thoroughly.

Do not clean spray equipment or dump excess spray material near ponds, streams, or wells. Because it is difficult to remove all traces of herbicides from equipment, do not use the same equipment for insecticides or fungicides that you use for herbicides.

Dispose of empty pesticide containers promptly. Have them buried at a sanitary land-fill dump, or crush and bury them in a level, isolated place.

NOTE: Some States have restrictions on the use of certain pesticides. Check your State and local regulations. Also, because registrations of pesticides are under constant review by the Federal Environmental Protection Agency, consult your county agricultural agent or State extension specialist to be sure the intended use is still registered.

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